

LUKACS, V.F.; GORACZ, Gy.; SIMON, Hedvig

Myocardial changes associated with Icterus gravis of the newborn. II. The effect of steroid treatment. Acta paediat. acad. sci. Hung. 4 no.3:419-424 '63

1. First Department of Paediatrics (director: prof. P. Gegesi Kiss) and Second Institute of Pathology (director: prof. L. Haranghy), University Medical School, Budapest.

\*

LUKACS, V. Ferenc, dr.; GORACZ, Gyula, dr.; SIMON, Hedvig, dr.

Contributions to the study of myocardial changes associated with icterus gravis neonatorum II. Gyermekgyógyászat 14 no.12: 364-369 D '63.

1. A Budapesti Orvostudományi Egyetem I sz. Gyermekklinikájának (Igazgató: Gegesi-Kiss Pál dr. akadémikus, egyetemi tanár) és a II sz. Kórház Intézet (Igazgató: Haranghy László dr., a MTA lev. tagja, egyetemi tanár) közleménye.

(ERYTHROBLASTOSIS, FETAL) (MYOCARDIUM)  
(HEMOLYSIS) (PHENYLHYDRAZINE)  
(HYDROCORTISONE) (PATHOLOGY)

ZOMBORI, Margit, dr.; GORACZ, Gyula, dr.; PATAKY, Zsigmond, dr.

Contributions to the pathology of breast sarcoma. Magy. sebesz.  
16 no.6:385-389 D '63.

1. A Budapesti Orvostudományi Egyetem II sz. Kóronctani  
Intézetének (Igazgató: Haranghy László dr. MTA levelező tag)  
és a Budapesti Orvostudományi Egyetem I sz. Sebészeti Klinikája  
(Igazgató: Hedri Endre [deceased] dr. egyetemi tanár) közleménye.  
(BREAST NEOPLASMS) (SARCOMA)  
(SURGERY, OPERATIVE) (PATHOLOGY)  
(CYSTOSARCOMA PHYLLOIDES)

HUNGARY

ROSTA, Janos, Dr. GORACZ, Gyula, Dr. Medical University of Budapest, I. Pediatric Clinic, II. Pathological Institute (Budapesti Orvostudományi Egyetem, I. Gyermekklinika, II. Korbonctani Intézet).

"The Embryopathy of Mumps."

Budapest, Orvosi Hetilap, Vol 104, No 34, 25 Aug 1963, pages 1598-1601.

Abstract: [Authors' Hungarian summary] The authors report a case of embryonic damage, caused by mumps. The mumps, contracted during the sixth week of pregnancy by the mother, was verified by a physician. The infant was born with severe heart defect and died two months later. In addition to the heart defect, dysraphia of the brain was also discovered during autopsy. On histological examination, changes in the pancreas, salivary glands, heart and liver were noted which are thought to be a result of the interuterine infection. Serological tests and embryological data support this assumption. All Western references.

1/1

~~szTANKAY Csaba dr., GORACZ, Gyula, dr.~~  
APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000516020011-5

Surgical treatment of Buerger's disease. Orv. hetil. 106 no. 39:  
1830-1833 26 S '65.

1. Budapesti Orvostudományi Egyetem, I. Sebészeti Klinika (igazgato: Rubanyi, Pal, dr.) és Heim Pál Gyermekkorház (igazgato: Sarkany, Jeno, dr.) Korbonctani Osztaly.

LUKACS, V.F.; GORACZ, Gy.; SIMON, Hedvig

Myocardial changes associated with icterus gravis of the newborn. Pt. 3. Acta paediat. 6 no. 2: 191-198 '65.

1. First Department of Paediatrics, University Medical School, Budapest, and Heim Pal Children's Hospital, Budapest. Submitted January 11, 1965.

GORACZ, I.

The effect of acute inflammation on the growth of experimental carcinoma in rats and on human breast carcinoma. Orv. Hetil. 93 no. 8:251-252 24 Feb 1952. (GLML 23:3)

1. Doctor. 2. Roentgen Clinic (Director -- Prof. Dr. Nandor Ratkoczy), Budapest Medical University.

GORACZ, I.

Experimental contributions on the problem of endogenous carcinogenic substances. Orv. hetil. 94 no.15:415-417 12 Apr 1953. (CML 24:4)

1. Doctor. 2. Roentgen Clinic (Director -- Prof. Dr. Nandor-Ratkoczy), Budapest Medical University.

GORAJ, Leszek

Electronic apparatus for distant measuring of parameters of deposits  
and for the rational exploitation of petroleum boreholes. Wiad naft  
6 no.12:282-284 D '60. (EEAI 10:6)

(Petroleum) (Electronic measurements)



TEICHEN, Jacek, mgr inż.; POLACZEK, Czesław, inż.; GORAJ, Leszek

Modern measuring technique and automation in mining petroleum  
and gas deposits. Nafta 21 no.3:72-74 Mr '65.

1. Petroleum Institute, Krakow.

PADOVTSOVA, G.; GORAK, B.; BOR, I.; BRDLIK, professor, zavednyushchiy,

Angiocardiography in congenital anomalies of the heart shape. Vop.pediat.  
21 no.2:35-47 Mr-Apr '53. (MLRA 6:6)

1. Vtoraya detskaya klinika Przhskogo universiteta.  
(Diagnosis, Radioscopic) (Heart--Diagnosis) (Heart--Abnormalities  
and deformities)

KHASYMSKI, M.; KEL'M, M. [Kelm, M.]; SHIDLOVSKAYA, S. [Szydlowska, S.];  
GORAK, B. [Horak, B.]; RIKHTER, V.

From public reports of the heads of the delegations of socialist  
countries. Tekh. est. 2 no.8:7-11 Ag '65. (MIRA 18:9)

1. Direktor TSentra promyshlennoy estetiki, khudozhestvennogo  
proyektirovaniya i konstruirovaniya Narodnoy Respubliki Bolgarii  
(for Khasymski).
2. Predsedatel' Soveta po khudozhestvennomu kon-  
struirovaniya Germanskoy Demokraticheskoy Respubliki (for Kel'm).
3. General'nyy sekretar' Soveta po tekhnicheskoy estetike pri  
Predsedatele Soveta Ministrov Pol'skoy Narodnoy Respubliki (for  
Shidlovskaya).
4. Zamestitel' ministra promyshlennosti tovarov  
shirokogo potrebleniya, zamestitel' predsedatelya Soveta po  
tekhnicheskoy estetike Chekhoslovatskoy Sotsialisticheskoy  
Respubliki (for Gorak).
5. Direktor TSentra khudozhestvennogo  
konstruirovaniya v Zagrebe Sotsialisticheskoy Federativnoy  
Respubliki Yugoslavii (for Rikhter).

GORAK, I.

Manufacture of worsted yarn from polyester fibers and mixtures  
of them. Tekst.prom. 20 no.8:66-69 Ag '60. (MIRA 13:9)

1. Sotrudnik Chexhoslovatskogo Nauchno-issledovatel'skogo  
instituta shersti v g.Brno.  
(Worsted) (Textile fibers, Synthetic)

MATEJKA, Sh., doktor tekhn.nauk prof. (Chexhoslovatskaya Sotsialisticheskaya Respublika, Praga); GORAK, K., inzh.

Low-voltage net-type closed networks. Izv.vys.ucheb.zav.; energ.  
3 no.10:17-25 0 '60. (MIRA 13:11)

1. Predstavlena kafedroy elektricheskikh sistem Moskovskogo  
ordena Lenina energeticheskogo instituta.  
(Electric power distribution)

S/661/61/000/006/061/061  
D267/D302

AUTHORS: Gorak, M., Shneider, B. and Bazhant, V.

TITLE: Molecular spectra of methyl phenyl siloxanes

SOURCE: Khimiya i prakticheskoye primeneniye kremneorganicheskikh soyedineniy; trudy konferentsii, no. 6: Doklady, diskussii, resheniye. II Vses. konfer. po khimii i prakt. prim. kremneorg. soyed., Len. 1958. Leningrad, Izd-vo AN SSSR, 1961, 272-277

TEXT: The investigation was carried out in order to check the occurrence of characteristic frequencies corresponding to the methyl or phenyl groups, and possibly to discover other characteristic frequencies in the infrared absorption spectra and Raman spectra. The general methods of preparing the individual methyl phenyl siloxanes (and in particular methyl phenyl tetrasiloxanes) are given. In all, 23 substituted silanes and siloxanes were studied, mainly in the frequency range  $800 - 600 \text{ cm}^{-1}$ . Characteristic frequencies

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Molecular spectra of ...

S/661/61/000/006/061/081  
D267/DJ02

were detected in both spectra for various elementary members. It was found that the descending displacement of the characteristic frequency for the Si-O-Si group can be used as the approximate measure of the number of phenyl groups in the molecule. To obtain the number of methyl groups in siloxanes it is better to use the method of areas of absorption bands near  $1250 \text{ cm}^{-1}$  than the method based on the calculation of the apparent coefficients of extinction. It is also possible to determine the number of the separate siloxane members by determining the apparent coefficient of extinction for bands near  $840$  and  $750 \text{ cm}^{-1}$ . The true number of phenyl groups is more conveniently determined by quantitative analysis based on ultraviolet spectra. The position of the symmetric frequency of the Si-O bond can be used to differentiate between linear and cyclic compounds, and even to determine the size of the cycle. There are 5 tables.

ASSOCIATION: Institut Khimii Chemoslovatskoy Akademii nauk, Praga  
(Institute of Chemistry, Czechoslovak Academy of Sciences, Prague)

Card 2/2

GORAK, Oldzhikh (Praga)

The IAV A-250 racing motorcycle. Za rul. 16 no.11:22 - N '58.

(MIRA 12:1)

(Czechoslovakia--Motorcycles)



**SUBJECT:** CSR/Mining

127-10-8/24

**AUTHORS:** Gorak, R., Mrnka, Z. and Prokop, S., Engineers

**TITLE:** Mining of Iron Ores in Ejpovice (Razrabotka zheleznykh rud v Eypovitse)

**PERIODICAL:** Gornyy Zhurnal, 1957, #10, pp 34-39 (USSR)

**ABSTRACT:** The Ejpovice iron ore deposit is located between Rokycany and Plzen. The deposit is of the sedimentary type and consists of 2 ore levels. The ore bodies have many shear zones due to tectonic phenomena and their dip angle is approximately 15°.

The ore of the lower level, whose thickness varies from 0 to 20 m, contains over 30 % of iron. That of the principal upper level, whose thickness is from 15 to 25 m, contains 25 to 27 % of iron.

The roof of the principal ore body is represented by sandstone, quartzite and micaceous slate which are very crumbling. The covering rocks are represented by Tertiary sediments.

The whole deposit area is divided by a railroad line into 2 parts: the northern part occupying 0.5 sq km is exploited by

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**TITLE:** Mining of Iron Ores in Ejpovice (Razrabotka zheleznykh rud v Eypovitse)

the strip mining. The southern part, occupying 0.7 sq km, will be mined by the underground method. The planned annual output of the both parts will total 1,100,000 tons of ore.

The overburden is removed in a 10 m high bench, while ore is mined in 5 m high benches due to considerable tectonic disturbances.

Percussion drilling of bore holes, 150 to 200 mm in diameter, is performed with Soviet "BY-20-2" drilling machines.

Rock and ore are loaded with single-bucket excavators of the "Mb-2" and "E-25" types into dump trucks "T-111" (8-ton capacity) and "MA3-525" (25-ton capacity).

The article contains 7 photos and 5 tables.  
No references are cited.

**ASSOCIATION:** Not indicated

**PRESENTED BY:**

**SUBMITTED:** No date indicated

**AVAILABLE:** At the Library of Congress.

Card 2/2

GONAK, S.V.

USSR/Geophysics - Earth's Origin Nov/Dec 53

Conference held 27-28 March 1953 in Kiev on Contemporary Theories of the Origin and Development of the Earth, S.V. Gorak and D.Ye. Panchenko (reporters)

Iz Ak Nauk SSSR, Ser Geofiz, No 6, pp 571-573

Conference was organized by the Kiev regional branch of VNIIO (All-Union Scientific Society of Engineers and Technicians [mining]) together with the Inst of Geol Sci, Acad Sci USSR, and the geol section of the Kiev House of Scientists. Participating in the conference were scientific workers

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and institute instructors, astronomers, geologists, geophysicists, geochemists of Moscow, Kiev, and L'vov. Reports were read by B.Yu. Levin, P.Ya. Galushko, Ye.S. Burksr, V.V. Belousov and N.F. Balyzhovskiy.

~~GORAY S. V.~~

Stratigraphy of the lower parts of the Tournai stage and the boundary between the Devonian and Carboniferous in the Donets Basin according to the ostracod fauna. Geol. zhurn. 16 no.1:33-40 '56.

(MLRA 9:8)

(Donets Basin--Ostracoda, Fossil)

(Donets Basin--Geology, Stratigraphic)

SHUL'GA, P.L.; ISHCHENKO, A.M.; ISHCHENKO, T.A.; GORAK, S.V.

On the Devonian supersaline series in the region of Kalaidintay  
in the Dnieper-Donets Lowland. Dop. AN URSR no.2:165-168 '57.  
(MLRA 10:5)

1. Institut geologicheskikh nauk AN URSR. Predstaviv akademik  
AN URSR V.G. Bondarchuk.  
(Dnieper Lowland--Geology, Stratigraphic)

GORAK, S. V.

SHUL'GA, P. L.; GORAK, S. V.

Some results of the Dnieper-Donets geological expedition of the  
Academy of Sciences of the U.S.S.R. in the summer of 1956. Visnyk  
AN URSS 28 no.2:54-56 P '57. (MLRA 10:4)  
(Dnieper Valley--Geological surveys) (Donets Basin--Geological  
surveys)

(Gorak, S. V.)

AUTHORS Shul'ga, P.L., Ishchenko, A.M., 20-4-42/60  
Ishchenko, T.A. and Gorak, S.V.

TITLE New Data Concerning the Devonian of the Dnepr-Donets  
Depression.  
(Novyye dannyye o devone Dneprovsko-Donetskoy vpadiny.)

PERIODICAL Doklady Akademii nauk SSSR, 1957, Vol. 115, Nr 4,  
pp. 780-782 (USSR)

ABSTRACT Devonian deposits in a normal, undisturbed stratification  
above the salt mass in the above-mentioned depression  
were hitherto unknown, although they were since 20 years  
discovered in breccias at several places. This rendered  
difficult the determination of the character of the  
upper salt mass as well as of its age. Just as unsolved  
remained the problem of the salt age, although several  
researchers stubbornly ascribed to it a Jivet age.  
Below the Devonian of the Chernigev elevation and the  
Pripyat' depression no salt was found. The Pripyat'  
depression is recently considered by some geologists  
as a structure independent of the Dnepr-Donets depres-  
sion. This gave rise to the assumption of a different  
facial stand of the Devonian in these two regions and  
of a different age of salt in them. It was not before a

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20-4-42/60

New Data Concerning the Devonian of the Dnepr-Donets Depression.

deep boring near the village Kalaydintsy (northwest of Lubny) in the year 1956 that clearness was obtained. But the Devonian layers were wrongly classified with the Carboniferous, in spite of the Devonian age of the spores determined from it. Upper Visé deposits occur in the Devonian roof. Numerous foraminifera were determined here which indicate an agreement of the contained rocks with the lower half of the C<sub>1</sub>g zone of the Donets basin. After a thorough description of the individual layers and the fossils contained in them the authors come to the following conclusion:

- 1) Apart from the salt and the lower portion of salt the Devonian is in the Dnepr-Donets depression represented by a normally deposited thick (about 2000 m) mass of Upper Devonian upper salt deposits. They correspond to the upper salt mass of the Upper Devonian of the Pripyat' deflection.
- 2) In the late Devonian era the Dnepr-Donets depression and the Pripyat' deflection formed a uniform geological structure. They possessed a uniform stage formation and sedimentation which took place as well

CARD 2/3

New Data Concerning the Devonian of the Dnepr-Donets Depression.

under conditions of a continental lagoon as under conditions of a shallow sea. Temporarily a direct connection with the Western European Devonian sea existed.

- 3) The present data indicate that at the late Devonian time salt structures occurred in the relief of the Dnepr-Donets depression which were analogous to that of Kalaydintsy. Toward the beginning of sedimentation of analogues of the lower parts of the C<sub>1</sub>g zone of the Donets basin they were completely cut off.

There are 10 Slavic references.

ASSOCIATION:

Institute for Geological Sciences AN Ukrainian SSR.  
(Institut geologicheskikh nauk Akademii nauk Ukr.  
SSR)

PRESENTED:

By M.M. Strakhov, Academician, March 11, 1957

SUBMITTED:

November 5, 1956

AVAILABLE:

Library of Congress.

CARD 3/3

GORAK, Sergey Vladimirovich [Horsk, S.V.]; BONDARCHUK, V.G. [Bondarchuk, V.H.], akademik, otv.red.; MEL'NIK, I.F., red.izd-va; MATVIYCHUK, O.O., tekhn.red.

[Ostracoda in certain middle and upper Carboniferous horizons of the Donets Basin and factors governing their existence]  
Ostrakody delakyykh horyzontiv seredn'oho i verkhn'oho karbonu Donets'koho basainu ta umovy ikh isnuvannia. Kyiv, Vyd-vo Akad.nauk URSR, 1958. 74 p. (MIRA 12:8)

1. AN USSR (for Bondarchuk).  
(Ostracoda, Fossil)



GORAK, S.V. [Horak, S.V.]

Stratigraphic distribution of ostracods in the limestone formation  
of the lower Carboniferous in the Donets Basin. Geol.zhur. 18  
no.3:35-4) '58. (MIRA 11:11)

(Donets Basin--Ostracoda, Fossil)

~~GORAK, S.V.~~ [Horak, S.V.]

Anniversary session of the All-Union Paleontological Society.  
Geol.shur. 18 no.3:112-114 ' 58. (MIRA 11:11)  
(Paleontological societies)

~~GORAL S. K.~~

Ostracods and stratigraphy of the lower Carboniferous in the  
Donets Basin. Trudy VNIIGI no.14:169-176 '59. (MIRA 12:10)

1. Institut geologicheskikh nauk AN USSR.  
(Donets Basin--Geology, Stratigraphic)

GORAK, S.V. [Horak, S.V.]

~~Association of facies and ecology of Donets lower Cretaceous~~  
ostracods. Geol. zhur. 19 no.3:3-14 '59. (MIRA 12:10)  
(Donets Basin--Ostracods, Fossil)

AYZENVERG, D.Ye. [Aizenverg, D.IE.]; BARANOVA, N.M.; VIKLICH, M.P.;  
 GOLYAK, L.M. [Goljak, L.M.]; GORAK, S.Y. [Horak, S.V.];  
 DIDKOVSKIY, V.Ya. [Didkovs'kiy, V.IA.]; ZELINSKAYA, V.O.  
 [Zelins'ka, V.O.]; ZERNETSKIY, B.P. [Zernets'kiy, B.P.];  
 KAPTARENKO-CHERNOUSOVA, O.E.; KRAYEVA, Ye.Ya. [Kraieva, IE.IA.];  
 KRASHENINNIKOVA, O.V.; KUTSIBA, A.M.; LAPCHIK, T.Yu.; MAKARENKO,  
 D.Ye.; MOLYAVKO, G.I. [Moliavko, H.I.]; MULIKA, A.M.; PASTERNAK,  
 S.I.; PERMYAKOV, V.V.; ROMODANOVA, A.P.; ROTMAN, R.N.; SLAVIN, V.I.;  
 SOKOLOVSKIY, I.L.; SOROCHAN, O.A.; SYABRYAY, V.T.; TKACHENKO, T.O.;  
 SHUL'GA, P.L. [Shul'ha, P.L.], doktor geol.-mineral.nauk; YAMNICHENKO,  
 I.M. [Iamnychenko, I.M.]; BONDARCHUK, V.G. [Bondarchuk, V.H.], akade-  
 mik, otv.red.

[Atlas of paleogeographical maps of the Ukrainian and Moldavian  
 S.S.R. with lithofacies elements. Scale 1:2,500,000] Atlas paleo-  
 geografichnykh kart Ukraini's'koi i Moldavi's'koi RSR z elementamy  
 litofatsii. Mashtab 1:2,500,000. Sklady D.IE. Aizenverg i dr.  
 Za zahal'nym kerivnytstvom V.N.Bondarchuka. Kyiv, 1960. xvi p.,  
 78 col.maps. (MIRA 13:12)

1. Akademiya nauk USSR, Kiyev. Institut geologicheskikh nauk.
  2. Institut geologicheskikh nauk AN USSR (for all, except Bondarchuk,  
 Pasternak, Slavin). 3. Instytut geologii korysnykh kopalyn AN URSS  
 (for Pasternak). 4. Moskovskiy gosudarstvennyy universitet im.  
 Lomonosova (for Slavin).
- (Ukraine--Paleogeography--Maps) (Moldavia--Paleogeography--Maps)

KRANDIYEVSKIY, Vadim Semenovich[Krandiieva'kyi, V.S.]; GORAK, S.V.  
[Horak, S.V.], kand. geol.-miner. nauk, otv. red.;  
SERDYUK, O.P., red.; TURBANOVA, N.A., tekhn. red.

[Ostracoda in the Silurian sediments of Podolia] Fauna  
ostrakod siluriiskikh vidkladiv Podillia. Kyiv, Vyd-vo  
AN URSR, 1963. 147 p. (MIRA 16:11)  
(Podolia--Ostracoda, Fossil)

GORAK, S.V.

Upper Visean and Lower Namurian Ostracoda of some regions in the  
northwestern zone of the Greater Donets Basin. Trudy Inst. geol.  
nauk AN URSR Ser. strat. i paleont. no.48:154-204 '64.  
(MIRA 18:1)

BERENSHTEYN, Leonid Yefimovich; GORAK, Vladimir Vladimirovich  
(Horak, V.V.); GODLEVSKAYA, V.O. [Hodlevs'ka, V.O.], red.;  
MEYEROVICH, S.L., tekhn. red.

[The Ukraine works for virign lands] Ukraina - tsilynym  
zemliam. Kyiv, Derzhpolitvydav URSR, 1962. 81 p.  
(MIRA 15:7)

(Ukraine--Agriculture)



GORAKOVA, Korneliya [Horakova, Kornelia]; SHVARTS, Shtefan [Schwarz, Stefan]

Cyclic matrices and algebraic equations over a finite field.  
Mat fyz cas SAV 12 no.1:36-46 '62.

1. Katedra matematiky Slovenskej vysokej školy technickej, Bratislava.  
Authors' address: Gottwaldovo námestí 2, Bratislava.

GORAL, A.

Distr: 4E20

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631.318

Rusi J. Goral A. Low Nickel Content Permalloy Containing 36% of Nickel.

"Permalloy niskoniklowy o zawartości 36% niklu". Przegląd Telekomunikacyjny. No. 8, 1957, pp. 242-246, 9 figs., 4 tabs.

Research work carried out by the Institute of Non-Ferrous Metals, has demonstrated the complete serviceability of Polish made 36% nickel alloy as regards minimizing low frequency magnetic sub-units, and especially transformers used, for instance, in the circuit of a transit terminal repeater, a field type generator telephone and so on. Moreover, attention is directed to the versatility of the low nickel content permalloy, making it possible to obtain a material having either a flat permeability characteristic within the range of weak fields or increased values of the initial and maximum permeability. High importance is also attributed to the economic factor of the low content of nickel. The results obtained when melting the permalloy under vacuum justify the expectation that the 36% nickel alloy may in some cases be suitable for replacing high nickel content permalloys.

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GORAL, Aleksander, ins.

Labor safety in the car service in 1960. Przegl kolej mechan  
13 no.5:155-157 My '61.

GORAL, Arkadiusz; MAJKA, Jan

Certain problems of the theory and design of symmetric transformer-coupled transistor converters. Prace Inst teletechn 3 no.2:131-149 '59;

P/022/60/000/008/002/004  
A222/A026

AUTHOR: Goral, Arkadiusz, Master of Engineering

TITLE: Magnetic Polarization Elements. Magnetic Polarization Reactor  
Elements; Ferroresonant Elements

PERIODICAL: Przegląd Telekomunikacyjny, 1960, No. 8, pp. 238 - 245

TEXT: The paper is a continuation of the article "Elementy o prostokątnej  
petli histerezy - transformatory nasycane" (Elements with a rectangular hysteresis  
loop - saturation transformers) printed in the 10-11, 1959 issue of the periodical.  
The author presents a basic description of physical and technological properties  
of magnetic materials used in the construction of magnetic polarization elements;  
he further describes memory storage properties of ferromagnetic cores with a re-  
ctangular magnetization loop and the principles of saturation transformers in  
dynamic circuits. Frequent use is made of references; no investigation or conclu-  
sions are involved. There are 18 figures and 12 references: 2 Polish, 1 Soviet  
and 9 English.

ASSOCIATION: Ośrodek Badań Sprzętu Łączności (Research Center of Communications  
Card 1/1 Equipment).

P/022/60/000/010/001/012  
A222/A126

AUTHOR: Góral, A.

TITLE: Scientific session of the Polish Academy of Sciences on the subject: "Reliability, stability and life of radioelectronic equipment components"

PERIODICAL: Przegląd telekomunikacyjny, no. 10, 1960, 294

TEXT: The session of the Polish Academy of Sciences with about 150 participants was convened on June 3, 1960, at the Palace of Culture and Science in Warszawa by a preparatory committee headed by Professor A. Kiliński. The committee consisted of Director, Master of Engineering J. Auerbach; Colonel, Master of Engineering J. Biernacki; Director, Master of Engineering A. Czechowski; Docent S. Darecki; Master of Engineering A. Góral (director of the session); Master of Engineering Z. Kaczkowski (Scientific Secretary); Director, Docent S. Kielan; Director, Doctor of Engineering A. Wojnar. Four reports and seven papers have been read at the session. The reports were: On the reliability of electronic equipment (A. Kiliński); Preliminary working program on the reliability of electronic equipment

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Scientific session of the Polish Academy...

P/022/60/000/010/001/012  
A222/A126

(A. Czechowski); Characteristics of reliability tests performed by the OBSL (Communications Equipment Testing Center) (A. Goral); Basic problems of the reliability theory of electronic equipment. Principles of evaluation and methods of analysis of component and organism reliability (K. Grzesiak). The papers were: Excerpts from a paper on performance reliability of commercial radio receivers (S. Osadnik); Work organization in the evaluation of reliability tests (E. Nowakowski); Results of some research on the parameter stability and life of Polish-made electron tubes and point-contact germanium diodes (E. Nowakowski); Results of some research on the reliability, life and stability of OWS-II and OBW resistors (E. Paczkowski); Conclusions from some research on the stability and life of KSF and KRC-type capacitors (E. Paczkowski); Results of research on temperature-induced reversible and irreversible modifications in ferrites (L. Olech and Z. Jaranowski); Research on the applicability of characteristic functions of irreversible processes in the determination of filter stability (H. Dutkowski). The session appointed a commission which consisted of Lieutenant Colonel, Doctor of Engineering T. Niewiadomski (Chief); Doctor of Engineering A. Wojnar; Master of Engineering S. Firkowicz; Lieutenant, Master of Engineering R. Kulesza; Master of

Card 2/3

Scientific session of the Polish Academy...

P/022/60/000/010/001/012  
A222/A126

Engineering S. Nowak; Master of Engineering K. Rudzka. The commission prepared a resolution which is printed in the same issue of the periodical.

Card 3/3



GORAL, A.

Partial switching of rectangular hysteresis-loop ferrites. Bul Ac  
Pol tech 9 no.2:95-9) '61

1. Presented by J. Grosskowski.

(Ferrites) (Elasticity)

24944

P/019/61/010/002/003/009  
D253/D303

9.7/40

24,2200

AUTHOR:

Góral, A.

TITLE:

Dynamic characteristics of ferrites with a rectangular hysteresis loop

PERIODICAL:

Archiwum elektrotechniki, v. 10, no. 2, 1961,  
407-438

TEXT: The author deals with the problem of interpreting dynamic characteristics of ferrites with respect to pulse operation and magnetic amplifiers. The magnetizing characteristics of ferrites are marked by the non-linear relationship between flux density and magnetizing force. The magnetizing force can be expressed as:

$$H = \frac{0.4 \pi I w}{l} \quad (1)$$

where H = magnetizing force (Oe), I = magnetizing current A, w = number of turns, l = mean length of magnetic path in a closed core or "in a core of infinite length" (cm). The flux density is

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expressed as:

$$B = \frac{\Phi}{q} = B_0 + \frac{10^8}{wq} \int_0^{\tau} u dt \quad (2)$$

where  $B$  = mean value of flux density ( $G_s$ ),  $B_0$  = initial flux density,  $\tau$  = magnetizing time (sec),  $q$  = cross section ( $cm^2$ ),  $u$  = voltage across a choke at a given instant,  $w$  = number of turns,  $\Phi$  = magnetic flux. The complex  $\mu$  is expressed as:

$$\mu = \frac{\hat{B}}{\hat{H}} = \mu_1 - j\mu_2, \quad (3)$$

where  $\hat{B}$ ,  $\hat{H}$  - first harmonic quantities of flux density and magnetizing force,  $\mu_1$  - real part of complex permeability, known as proportionality factor in an expression for inductance,  $\mu_2$  - imaginary part of the complex permeability, called the loss factor. The concept of complex permeability is particularly advantageous when considering very weak fields; the analysis of dynamic characteristics of ferrites requires a different approach, the complex permeability is still applicable but with restrictions, eddy current effects must be considered and the process of magnetizing at higher frequencies

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generally. In magnetic materials with rectangular hysteresis loop, the residual flux density  $B_r$  approaches the saturation flux density  $B_s$ . The rectangularity factor is

$$p = \frac{B_r}{B_s} \quad (4)$$

and under static conditions the permeability

$$\mu_d = \frac{dB}{dH} \quad (5)$$

when  $H = H_c$  the permeability is large.  $H$  - magnetizing force,  $H_c$  - coercive force. Practical results, using ferrites with rectangular loop helped to establish the following relation

$$\tau_M = \frac{S}{H_M - H_0} \quad (6)$$

where  $\tau_M$  - magnetizing time from peak to peak of flux density, (switching time), measured on a scope between two points on the induced voltage curve;  $H_M$  - magnetizing force,  $H_0$  - critical magnetic force above which permanent changes are introduced to the magnetic material,  $S$  - factor of proportionality, called switching

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factor. Particular attention is drawn to the fact that the critical magnetizing force  $H_0$  in this work will not be precisely equivalent to  $H_0$  in expression (6), but  $H_0$  will be the magnetizing force equivalent to  $H_c$  in a static hysteresis loop. The following types of core were tested: 1) Ring cores made of tapes of alloys containing 50% Ni and having rectangular hysteresis loop. Tapes of different thickness were used; 2) Ferrite cores. a) Cores employing tapes of 0.06 mm and 0.1 mm thickness produced by the Institute of Non-Ferrous Metals in Gliwice; b) Cores employing 0.05 mm thick tape of HCR alloy of British manufacture; c) Cores of 0.065 mm thickness of permennorm 5000Z produced by Vacuumschmelze GDR; d) Toroidal cores of ferrites Mn-Mg-Zn of nominal composition  $35Fe_{20}3$ ,  $31MnO$ ,  $22.5MgO$ ,  $11.5ZnO$  baked at normal air atmosphere at a pressure of 1.5 mm Hg. Inside diameter of core - 3 mm, outside diameter - 4 mm. The graphs in Figs. 16 and 17 represent the relationship  $\log S = f(\log \frac{1}{M})$ ; the interesting point to notice is the change into non-linear part. Oscilloscope tracings of induced voltages into the core during the magnetizing process are shown photographically. The

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tracings shown are for different materials and for a different value of the magnetizing charge:  $s = S$ ,  $s = \frac{3}{4}S$ ,  $s = \frac{1}{2}S$ ,  $s = \frac{1}{4}S$ ,  $s = \frac{1}{6}S$ . Fig. 20 shows the reversible magnetizing process. The results of the experiments indicate that the curves  $\Delta B = \phi(s)$  can be subject to good approximation by the following function:

$$\Delta B = C_1 + C_2 \operatorname{th}(\alpha s - \beta). \quad (14)$$

The constants  $C_1$ ,  $C_2$  and  $\beta$  can be determined from the starting conditions, knowing that at  $s = 0$ ,  $\Delta B = B_r - B_0$  (see Fig. 20). It should be noted that the main feature of  $\Delta B = \phi(s)$  curves is their independence of the series resistance of the magnetizing circuit. The interpretation of the experimental results suggests that within the range of a small magnetizing force (near  $H_c$ ) non-uniformity of inter-domain boundary motions is predominant. This behavior at low magnetizing force is of importance in magnetic amplifier circuits. There are 29 figures and 28 references: 8 Soviet-bloc and 20 non-Soviet-bloc. The 4 most recent references to English-language publications read as follows: E.M. Gyorgy, "Rotation-

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Dynamic characteristics...

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al model of flux reversal in square-loop ferrites", J. Appl. Phys., v. 28, no. 9, 1957, pp 1011-1015; F.B. Humphrey, E.M. Gyorgy, "Flux reversal in soft ferro-magnetics." J. Appl. Phys., v. 30, no. 6, 1959, pp 935-939; W. Lee Shevel, Jr., "Millimicrosecond switching properties of ferrite computer elements." J. Appl. Phys., suppl. v. 30, no. 2, 1959, pp 47-48; A. Papoulis, T.C. Chen, "Domain theory in core switching" Proceedings of the symposium on the role of solid state phenomena in electric circuits. Interscience publishers, 1957, pp 197-232.

SUBMITTED: May 21, 1960

Card 6/8

GORAL, Arkadiusz, mgr inż.

Certain relations for the circuits of asymmetric transistor converters with magnetic energy accumulation in the core.  
Prace Inst teletechn 4 no.2:3-10 '60.

1. Ośrodek Badawczy Sprzętu Łączności, Żegrze k.Warszawy.



GORAL, Arkadiusz, dr inz.

Second National Symposium on Reliability of Electronic  
Components and Equipment. Przegl elektroniki 4 no. 10/11:  
545-547 O-N '63.

The reliability problem in Poland during the years 1960-  
1963 and the activities of coordination of the Polish  
Academy of Sciences. Ibid.:554-556.

GORAL, Arkadiusz

Present state and tasks of the physical theory of nonresonant magnetic amplifiers. Archiw autom 8 no. 4: 387-400 '63.

1. Katedra Magnetykow i Dielektrykow, Politechnika, Warszawa.

GORAL, Arkadiusz

Analysis of the minor magnetization loop of ferromagnetics  
with large Br/Bs. Archiw automat 8 no. 4: 401-409 '63.

1. Katedra Magnetykow i Dielektrykow, Politechnika, Warszawa.

GORAL, A.

On the structural current density method in analysis of the magnetization process. Bul Ac Pol tech 11 no.8:435-441 '63.

1. Presented by A.K. Smolinski.

GORAL, A.

Magnetic diffusion aftereffect in the rotational process of  
flux reversal in ferromagnetics. Bul Ac Pol tech 11 no.9:  
481-486 '63.

1. Presented by A.K. Smolinski.

GORAL, A.

The problem of apparent nonmagnetic gap in ferromagnetic cores with high  $B_r/B_s$  ratio. Bul Ac Pol tech 11 no.11: 667-672 '63.

1. Department of Magnetism and Dielectrics, Telecommunication Faculty, Technical University, Warsaw. Presented by A.K. Smolinski.

GORAL, A.

Charge control approach to bistate and bistable operation of the magnetic amplifier. Bul Ac Pol tech 11 no. 12:769-775 '63.

1. Department of Magnetism and Dielectrics, Telecommunication Faculty, Technical University, Warsaw. Presented by A.K. Smolinski.

GORAL, Arkadiusz; PAWELEC, Jozef

Certain criterion of stable operation of digital magnetic circuits. Przegl elektroniki 5 no. 5:227 My '64.



P/0031/64/009/001/0061/0069

ACCESSION NR: AP4039541

AUTHOR: Goral, Arkadiusz (Gural', A.); Pawelec, Jozef (Pavelets, Yu.)

TITLE: One condition for the stable operation of parallel digital magnetic amplifier systems

SOURCE: Archiwum automatyki i telemechaniki, v. 9, no. 1, 1964, 61-69

TOPIC TAGS: magnetic storage line, magnetic delay line, digital amplifier, magnetic amplifier, magnetic amplifier system, magnetic device, square hysteresis-loop ferromagnetic, ferromagnetic

ABSTRACT: The condition for the stable operation of the examined system is that  $k_z < 1$ , where  $k_z$  is the disturbance factor, defined as the ratio of the peak value of the magnetic field intensity of the disturbing flux to some threshold value  $H_0$  which is determined from the magnetizing "charge" fluxes according to the equation  $\Delta B = \varphi \left[ \int_0^t H_M dt \right]$ , where  $B$  is the irreversible change in induction, and  $H_M$  is the magnetizing field. The relations defining the transients  $k_z$  as a function of the system's parameters, based on the approximation of the diode characteristics and magnetizing pulses, are derived. The magnetic characteristics

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ACCESSION NR: AP4039541

of the core are linearized according to the magnetizing "charge" curves. The applicability of germanium and silicon diodes for use in this system was examined. According to the derived equations for  $k_z$ , a stable operation is relatively easy to attain if diodes with a clearly-expressed nonlinearity and cores with a high value for the ratio  $H_0\tau_p/S$  ( $\tau_p$  is the switching time and  $S$  is the switching coefficient) are used. In the case of  $k_z = 1$ , no disturbances were observed in the operation of the system with a change in the peak values of the pulses within the limits -50 to 100%. Experimental results show a very good conformity between calculated and measured characteristics. Further tests on a two-phase register showed that the instrument can also operate stably with  $k_z > 1$ , but with a greatly reduced reliability. The shape of the core's output voltage pulse and period of its complete magnetic reversal also have an effect on the stability of operation. Original article has: 4 figures and 14 equations.

ASSOCIATION: none

SUBMITTED: 11Sep63

DATE ACQ: 18Jun64

ENCL: 00

SUB CODE: DP, EC

NO REF SOV: 000

OTHER: 004

Card 2/2

L 6684-55 EWT(1)/EWA(h) AFMD(p)/ASD(a)-5/ESD(c)/ESD(dp)/RAEM(t)/RAEM(a)

ACCESSION NR: AP4046461

P/0051/64/009/002/0199/0212

48  
47

AUTHOR: Goral, Arkadiusz (Gural', A.)

TITLE: Relay and digital systems of nonresonant magnetic amplifiers nonlinear operation

SOURCE: Archiwum automatyki i telemechaniki, v. 9, no. 2, 1964, 199-212

TOPIC TAGS: nonresonant magnetic amplifier, nonlinear signal, feedback, relay system, digital system, positive feedback

ABSTRACT: The author discusses two aspects of nonlinear operation of nonresonant magnetic amplifiers in connection with signal-forced and feedback-forced nonlinearities respectively. Signal forced nonlinearity is the usual case of bistate operation of magnetic amplifiers, typical for the digital circuits. Feedback forced nonlinearity results in relay operation of magnetic amplifiers. On the basis of charge control approach the transients are analyzed in relay-operating circuits of center-tap amplistats with additional electric as well as magnetic positive feedback. Simple and general expressions are obtained for switching time

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ACCESSION NR: AF4046461

without limitations imposed by the theories hitherto developed, regarding the value of control circuit linear impedance. It is shown that if half-cyclic response is required, the relay-operating magnetic amplifier becomes equivalent to that of digital type. After the expressions were given of boundary signal of half-cyclic response, the analogy between bistable and bistate kind of operation of magnetic amplifiers was further extended regarding the maximum ratio of output quantities corresponding to the two states possible. The main results of the work are summarized in the table containing a comparison between the parameters of two types of circuits under consideration. It is concluded that the unity of theory of relay and digital magnetic circuits is primarily due to generalized physical approach to magnetization processes in ferromagnetics.

ASSOCIATION: Katedra Magnetykow i Dielektrykow Politechniki Warszawskiej  
(Department of Magnetics and Semiconductors of the Warsaw Polytechnic Institute)

13 Jan 64

ENCL: 00

WE 1155 57

NO REF SCV: 001

OTHER: 007

Card 2/2

GORAL, A.

Diode leakage in "plo. response" amplistats; parallel-connected saturable reactor. Bul Ac Pol tech 12 no.6:413-417 '64.

Charge control theory of the series-connected saturable reactor. Ibid.:419-423.

1. Department of Magnetism and Dielectrics, Division of Communication, Technical University, Warsaw. Presented by A.K. Srolinski.

L 23928-65

ACCESSION NR: AP4039453

P/0019/64/013/001/0073/0110

AUTHOR: Goral, A.

TITLE: Mechanism of magnetization and circuit properties of magnetic cores

SOURCE: Archiwum elektrotechniki, v. 13, no. 1, 1964, 73-110

TOPIC TAGS: magnetic core, magnetic core magnetization, magnetization reversal, ferromagnetics, square loop ferrite, solid state physics, solid state circuitry, domain wall, Bloch wall, ferromagnetic particle, ferrite

ABSTRACT: The magnetization mechanics determines the circuit properties of magnetic cores to a significant extent. The macroscopic characteristics of the core material can be interpreted on the basis of a model of the displacement of Bloch wall by the concept of the rotation of dipoles in relation to the examined frequency ranges. The basic formula for the motion of the Bloch wall was derived by the author in a previous study (A. Goral, "The equivalent structural 'current' density method in the magnetization process analysis," Bull. Acad. Polon., Sc. (Sc. Tech.), vol. 11, 1963, and can be written in the following form, provided that the term for inertia is omitted:

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ACCESSION NR: AP4039453

$$m_s \dot{x} + \beta x + \alpha x = k M_s H_H \quad (1)$$

where the threshold field  $H_0 = \alpha x_{\text{rev.max.}}/2M_s$  does not include the actual energy of the Bloch wall. The solution to equation (1) makes it possible to obtain expressions which link the values of the acting magnetic fields with the values for the average flux density. The parameter characterizing the material in the case of a reversible magnetization is the complex penetration factor. The formula determining the frequency characteristic  $\mu$  is derived for the case of ferrites ( $\beta = 0$ ). For the characterization of irreversible behavior of ferromagnetics (when  $\alpha x$  in equation 1 becomes a constant), the author introduces the concept of remagnetization resistivity. The macroscopic parameters obtained directly by equation (1) can be assumed by the appropriate "uniform wall displacement" mechanism. This mechanism is characteristic for reversible as well as for irreversible magnetization processes taking place in the case of sufficiently high values of the acting magnetic fields. In general, however, the nonuniformity of the Bloch wall displacement should be assumed as the basic indication of an irreversible magnetization process within a wide range of changes in the magnetizing field. This nonuniformity has a powerful influence on the numerical values of the parameters and at the same time is the starting point for a physical interpretation of the shapes of the hysteresis loops of engineering magnetic materials. The

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ACCESSION NR: AP4039453

basic equation for the rotational motion of a magnetic dipole has the following form

$$\dot{M} = \frac{\gamma}{1 + \alpha_0^2} (M \times H) - \frac{\gamma}{M_s} \left( \frac{\alpha_0}{1 + \alpha_0^2} + \lambda \right) (M \times (M \times H)). \quad (2)$$

In this equation  $\lambda$  is the damping coefficient from the Landau-Lifshitz equation;  $\alpha_0$  is the coefficient from the effects of a diffusion magnetic lag. It was proven that equation (2), just as the Gilbert equation of motion, is valid for the case of a "brief relaxation period." The analysis carried out in this study confirmed the validity of the previously developed concepts applicable for a unique theory of the self-saturation of magnetic amplifiers. Supplementary arguments for the development of a physical theory of nonlinear magnetic circuits are presented. "The author wishes to thank Prof. Doctor Adam Smolinskiy for hints and discussions during the progress of this work." Orig. art. has: 21 figures and 66 equations.

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L 23928-65

ACCESSION NR: AP4039453

ASSOCIATION: Katedra Magnetykow i Dielektrykow Politechniki Warszawskiej  
(Department of Magnetica and Dielectrics, Warsaw Polytecnic Institute)

SUBMITTED: 30Aug63

ENCL: 00

SUB CODE: EM

NO REF SOV: 000

OTHER: 023

Card 4/4

GORAL, A.

Charge control approach to series-connected saturable reactor  
with external magnetic feedback. Bul Ac Pol tech 12 no.7:  
547-550 '64.

1. Department of Magnetism and Dielectrics of the Division  
of Communication of the Technical University, Warsaw.  
Presented by A.K. Smolinski.

GORAL, A.; WIERZBA, H.

Some results of instantaneous reversible permeability investigations on square-hysteresis loop ferrite cores. Bul Ac Pol Tech 12 no.9: 675-679 '64.

1. Department of Magnetism and Dielectrics of the Warsaw Technical University, and Department of Wire Communication of the Gdansk Technical University. Submitted April 17, 1964.

I 22476-66 EWA(h)

ACC NR: AP6009330

SOURCE CODE: PO/0095/65/013/008/0079/0083

AUTHOR: Goral, A.

59  
B

ORG: Department of Magnetism and Dielectrics, Technical University,  
Warsaw (Katedra Magnetykow i Dielektrykow, Politechnika)

TITLE: Generalized charge-control approach to nonparametric devices

SOURCE: Polska akademia nauk. Bulletin. Serie des sciences techniques, v. 13, no. 8, 1965, 79-83

TOPIC TAGS: dielectric amplifier, magnetic amplifier, electrode, electronic/amplifier, transistor

ABSTRACT: Principles are presented for the structure of a generalized theory of nonparametric, nonresonance amplifiers, their basic physical structure, regardless of their function. Such general concepts are introduced as the averaging time, delay time, and availability time. The fundamental term of the theory is the generalized charge control, which is identified with the process of a total mobile charge in electronic (conductive) devices. The generalized charge control in magnetic or dielectric conductive amplifiers is interpreted correspondingly as a maximum gain of the magnetic or electric fluxes during the operating

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L 22476-66

ACC NR: AP6009330

cycles. The physical aspects of the input circuit of the device are expressed by the charge-transforming operator (CTO), and the physical properties of the input-circuit structure of the device itself are reflected by the charge-transforming parameter (CTP) of the control electrode. A few examples, used in the proposed theory, are given for the purpose of describing the properties of some electronic, magnetic, and dielectric devices, is emphasized that there are no known applications of CTO and the CTP in ordinary transistors using nonparametric charge-control devices. Orig. art. has: 2 figures and 4 formulas. [Based on author's abstract] [AM]

SUB CODE: 09/ SUBM DATE: none ORIG REF: 001/ OTH REF: 00

Card 2/2 BK

L 22857-66

ACC NR: AP6009331

SOURCE CODE: PO/0095/65/013/008/0085/0090

21  
8

AUTHOR: Goral, A. (Gural', A.)

ORG: Department of Magnetism and Dielectrics, Technical University,  
Warsaw (Katedra Magnetykow i Dielektrykow, Politechnika)

TITLE: Charge control analysis of the ferroelectric amplifier

SOURCE: Polska akademia nauk. Bulletin. Serie des sciences techniques,  
v. 13, no. 8, 1965, 85-90

TOPIC TAGS: equation theory, transpolarizer, amplifier, ferroelectric  
material, charge control

ABSTRACT: Proceeding from the basic physical aspect of the existence  
of a clearly defined threshold field of irreversible changes of pola-  
rizations in the ferroelectric materials, a charge control method is  
given for investigating the properties of ferroelectric amplifiers.  
To carry out the charge control analysis, a basic single element  
ferroelectric amplifier was used as a model. The results are expressed  
in a qualitative form of equation theory, giving the experimental  
characteristics of charge control. The experimental data show the agree-  
ment with the theoretical predictions and provide a further illustration

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ACC NR: AP6009331

of the generality of charge control approach to nonparametric devices. The theory, presented in this article, is the first in literature on the numerical description of properties of the "transpolarizer" type ferroelectric amplifiers developed by S. Pul'vari. Orig. art. has: 4 figures and 19 formulas. [Based on author's abstract] [AM]

SUB CODE: 09/ SUBM DATE: none ORIG REF: 002/ OTH REF: 003/

Card

2/2

LC

L 39921-66

ACC NR: AP6018133

SOURCE CODE: PO/0095/65/013/009/0129/0134

AUTHOR: Goral, A.—Gural', A.

ORG: Department of Magnetism and Dielectrics, Telecommunication Faculty, Technical University, Warsaw (Katedra Magnetyzmu i Dielektryków, Wydział Łączności, Politechnika)

TITLE: General theory of charge control of injection-type transistors

SOURCE: Polska akademia nauk. Bulletin. Serie des sciences techniques, v. 13, no. 9, 1965, 129-134

TOPIC TAGS: control circuit, control theory, charge control theory, transistor, injection type transistor, charge operator, transfer function, *TRANSISTORIZED AMPLIFIER*

ABSTRACT: A general theory is presented for an injection-type transistor used as an amplifier. This theory is based on the author's previous concept of the general form of an operator transmission circuit. The charge-transforming operator of an input gate as well as the working transfer function of an output-circuit chain, have been found. An expression has been obtained which describes the properties of an amplifier independent of the signal level and the input resistance. This approach had been considered impossible in the past when the theory of charge control of transistors, formulated by J. J. Sparks and R. Beaufoy, concerned itself with current source control only. The paper was presented by J. Groszkowski, on 21 June 1965. Orig. art. has: 24 formulas and 2 figures. [Based on author's abstract] [AM]



ACC NR: AP6017911

(A)

SOURCE CODE: PO/0095/65/013/11-/0155/0163

AUTHOR: Goral, A. B.—Gural', A.

ORG: none

53  
B

TITLE: Transfer function of an output-circuit of an elementary <sup>25</sup> magnetic amplifier

SOURCE: Polska akademia nauk. Bulletin. Serie des sciences techniques, v. 13, no. 11-12, 1965, 155-163

TOPIC TAGS: elementary magnetic amplifier, nonparametric amplifier, ferromagnetic core, output circuit, *MAGNETIC AMPLIFIER, MAGNETIC CORE, ELECTRONIC CIRCUIT, FERROMAGNETISM*

ABSTRACT: In this article, which is a sequel to his previous works, the author analyzes the determination of the input voltage and parameters of the transfer function of an output-circuit for any charge in an elementary single-core magnetic amplifier. It is shown that nonlinearity is a main feature of magnetic amplifier loading if LC elements are involved. The output circuit can be considered linear only in the case of very weak signals. The author considers the nonlinearity of the transfer function more essential than nonlinearity related to the ferromagnetic-core material. The article was presented by A. K. Smolinski on 17 August 1965. Orig. art. has: 4 figures and 35 formulas.

[GC]

SUB CODE: 09/ SUBM DATE: none/ OTH REF: 002/ ORIG REF: 006/

Card 1/1 D

GORAL, E.

POL.

3282

031.438 : 638.24

Gundlach W., Góral E. Economical Heat Recuperation in Gas Turbines.

„Ekonomiczność rekuperacji ciepła w turbinach gazowych”. (Prace Inst. Mechan. No. 5), Warszawa, 1952, PWT, 10 pp., 24 figs.

The authors contend that the optimum gas turbine cycle, that is the most favourable as regards economic considerations and design (dimensions, weight) can only be correctly selected if due consideration is given to heat exchange phenomena. Pressure losses in gas turbines with recuperation system are in this respect, and contrary to many expressed opinions, of paramount importance, particularly since they vary within wide limits and are closely linked, though not always lucidly, with such other parameters as have to be closely examined. Adoption of the theory of similarity between heat exchangers has made it possible to allow, with relative accuracy, for — in addition to other factors — the influence of heat exchange on the efficiency of the turbine cycle. Means are thus provided, by correctly separating those functions which individualise the size, first cost and operation expenditure of recuperators, for closely defining the actual saving attributable to heat recuperation.

This method illustrated on an example of a simple Brayton-Joule effect cycle, can also be applied in cases of complex turbine cycles which have intricate flow circulation and for which, by other means, it is virtually impossible to determine optimum conditions.

GORAL, Edmund, mgr.inz.; GRZEGORZEWSKI, Wojciech, mgr.inz.

The KG 1 turning engine for steam turbines of medium output.  
Energetyka przem 10 no.6:225-226 Ja . '62.

1. Zakład Turbin Parowych, Instytut Techniki Ciepłej, Łódź.

GORAL, Edmund, mgr inż.; GRZEGORZEWSKI, Wojciech, mgr inż.

The AG-8 air turbine for model testing of turbine stages.  
Inst techn ciepl prace 9 no. 20:1-18 '64.

GORAL, L.

M. Chorazy, A. Gettlich, L. GORAL, B. Koloczek, E. Molawka, B. Penar, Z. Szveda, "Experimental Chemotherapy of Tumors with Hydrogen Peroxide," Nature, Vol. 182, No. 4632, 9 Aug 58, pp 395-96.

Published from the Department of Tumor Biology, Institute of Oncology, Gliwice, Poland. Received 1958.

GORAL, Roman

Frontonasal cranial hernia of unusual dimensions, late results of therapy. Polski przegl.chir. 27 no.1:3-9 Jan 55.

1. Z II Kliniki Chirurgicznej A. M., w Poznaniu Kierownik: prof. dr R.Drewno.

(FRONTAL SINUS, diseases,

frontonasal encephalo-meningocele in child, surg.)

(NASAL CAVITY, diseases,

frontonasal encephalo-meningocele in child, surg.)

(BRAIN, diseases,

encephalo-meningocele of frontal sinus & nasal cavity in child, surg.)

(MENINGES, diseases,

encephalo-meningocele of frontal sinus & nasal cavity in child, surg.)

GORAL, Roman

Congenital anomalous arteriovenous anastomosis of the extremity.  
Polski prześl. chir. 28 no.7:595-601 July 56.

1. Z II Kliniki Chirurgicznej A.M. w Poznaniu. Kierownik: prof.  
dr. R. Drows, Poznan, ul. Karwowskiego 22 m. 12.  
(ARM, blood supply,  
arteriovenous fistula, congen. (Pol))  
(FISTULA, ARTERIOVENOUS,  
arm, congen. (Pol))

MASTYNSKA, Maria; GORAL, Roman; BOGALA, Jozef

Significance of potassium in pre- and postoperative therapy. Polski  
przegl. chir. 28 no.8:853-856 Aug 56.

1. Z II Kliniki Chirurgicznej A.M. Poznan, Kier.: prof. dr.  
R. Drowski z Zakladu Chemii Fiziologicznej A.M. Poznan, Kier.:  
prof. Z. Stolsmann, Poznan, ul. Hetmanska 13 m. 5.

(POTASSIUM, therapeutic use,  
in postop. care (Pol))

(POSTOPERATIVE CARE,  
potassium replenishment (Pol))



GORAL, Roman

~~Isolated sarcoma in the gastric lymphatic system. Polski przegl.~~  
chir. 28 no.12:1227-1235 Dec 56.

1. Z II Kliniki Chirurgicznej A.M. w Poznaniu Kierownik: prof.  
Dr. R. Drows. Adres autora: Poznan, ul. Prsybyszewskiego 49  
(II Klin. Chir. A.M.).

(STOMACH NEOPLASMS

lymphosarcoma & reticulum cell sarcoma, surg. (Pol))

(LYMPHOSARCOMA, case reports

stomach, surg. (Pol))

(SARCOMA, RETICULUM CELL, case reports

stomach, surg. (Pol))

GRACZYKOWSKA-KOCZOROWSKA, Alicja; GORAL, Roman; SALWA, Wieslawa

Hormone-producing tumors of the adrenal cortex and their successful surgery. Polski tygod.lek. 15 no.25:959-963 20 Je '60.

1. Z II Kliniki Chorob Wewnętrznych A.M. w Poznaniu; kierownik: prof. dr Jan Roguski, z II Kliniki Chirurgicznej A.M. w Poznaniu; kierownik: prof. dr Roman Drews i z Zakładu Anatomii Patologicznej A.M. w Poznaniu; kierownik: prof. dr Janusz Groniowski  
(ADRENOGENITAL SYNDROME surg)  
(CUSHING SYNDROME compl)  
(ADRENAL CORTX neopl)

GORAL, Roman

Gastric polypi (the problem of malignant degeneration). Poznan.  
tow.przyjaciol nauk, wydz.lek. 21 no.3:1-58 '61.  
(STOMACH NEOPLASMS pathol) (POLYPI pathol)

GORAL, Roman

Studies on the ~~metastatic~~ spreading of gastric tumors to the lymph nodes. Poznan.tow.przyjaciol nauk, wydz.lek. 21 no.3:63-84 '61.  
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GORAL, Roman

Polyps of the stomach. Polski przegl. chir. 33 no.7/9:761-762 '61.

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R. Drews.  
(STOMACH DISEASES) . (POLYPI)

GORAL, Roman

Malignant tumors of the lymphatic system of the stomach. Polski  
przegl. chir. 33 no. 7/9:784-785 '61.

1. Z II Kliniki Chirurgicznej AM w Poznaniu Kierownik: prof. dr  
R. Drews. (STOMACH NEOPLASMS) (LYMPHATIC SYSTEM neopl)

GORAL, Roman

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dr med. R. Drews.

(DUODENAL NEOPLASMS) (NEURILEMMOMA)  
(HEMORRHAGE, GASTROINTESTINAL)

GORAL, Roman

Possibility for the surgical therapy of intrahepatic biliary stasis. Pol. przegl. chir. 35 no.4:323-329 '63.

1. Z II Kliniki Chirurgicznej AM w Poznaniu Kierownik: prof. dr R. Drews.

(JAUNDICE, OBSTRUCTIVE)  
(BILE DUCTS, INTRAHEPATIC)  
(SURGERY, OPERATIVE)



GORAL, Roman

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345-351 '63.

1. Z II Kliniki Chirurgicznej AM w Poznaniu Kierownik: prof.  
dr R. Drews.

(JAUNDICE, OBSTRUCTIVE)  
(BILE DUCTS, INTRAHEPATIC)  
(BILE)

GORAL, Roman; LUBANSKA, Zofia

Review of patients with jaundice caused by extrahepatic  
biliary stasis. Pol. przegl. chir. 35 no.7/8:851-853 '63.

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dr R. Drews.

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(SURGERY, OPERATIVE)

GORAL, Roman

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Pozn. tow. przyjac. nauk wydz. lek. 28:51-101 '64.

GORAL, Roman

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author's own observations. Pol. tyg. lek. 19 no. 51:1957-1960  
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1. Z II Kliniki Chirurgicznej Akademii Medycznej w Poznaniu  
(Kierownik: prof. dr. Roman Drews).

GORAL, Roman

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1. Z II Kliniki Chirurgicznej Akademii Medycznej w Poznaniu (kierownik: prof. dr. Roman Drews).

GORAL, Roman

Apropos of the surgical treatment of jaundice in extrahepatic bile stasis. Pol. tyg. lek. 19 no.19:715-716 4 My '64.

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GORAL, Roman; KORZENIOWSKI, Andrzej; TUSZYNSKI, Krzysztof

Artificial respiration apparatus for the "mouth-to-mouth"  
method. Pol. przegl. chir. 36 no.7:901-903 Je '64.

1. Z II Kliniki Chirurgicznej Akademii Medycznej w Poznaniu  
(Kierownik: prof. dr R. Drews).

GORAL, Roman

Accessory vascularization of the liver. Pol. przegl. chir.  
37 no.3:206-212 Mr '65.

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the aid of its stomach. Ibid.:241-247

1. Z II Kliniki Chirurgicznej Akademii Medycznej w Poznaniu  
(Kierownik: prof. dr. R. Drews).



GORAL, Stanislaw

Studies on the growth dynamics of the root systems of diploid and tetraploid forms of *Trifolium pratense* (L.) and *Trifolium hybridum* (L.) Roczn. nauk roln. rosl 88 no. 3:547-563 '64.

1. Department of Genetics, College of Agriculture, Olsztyn.

BR

ACCESSION NR: AP4044534

P/0007/64/000/037/0011/0011

AUTHOR: Goral, Wladyslaw; Walczewski, Jacek

TITLE: Poland's participation in observation and utilization of artificial satellites

SOURCE: Skrzydlata Polska, no. 37, 1964, 11

TOPIC TAGS: artificial satellite observation, satellite surveillance, satellite data analysis, earth figure, upper atmosphere, international geophysical year, atmospheric density, scientific organization

ABSTRACT: The largest Polish enterprise dealing with artificial satellites is the Sluzba Obserwacji Sztucznych Satelitow Ziemi (SSZ) (Artificial Earth Satellite Observation Service) which maintains 10 stations (3 in Warsaw, 2 in Krakow, and one each in Poznan, Gdansk, Olsztyn, Wroclaw, and Chorzow) connected with astronomical observatories or geodetic centers of universities. The work of the service is directed and coordinated by Komitet Miedzynarodowej Wspolpracy Geofizycznej (Committee for International Cooperation on Geophysics).

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of PAN, which also publishes the Biuletyn Polskich Obserwacji Sztucznych Satelitow (Bulletin of Polish Artificial Satellite Observations). The stations are part of the 'Kosmos' network operating out of Moscow, participate in the international 'Interobs' program, and are an integral part of the network observing regularly American and Canadian satellites. At the same time, they work in close cooperation with the state Panstwowy Instytut Hydrologiczno-Meteorologiczny (State Institute of Hydrology and Meteorology) (PIHM) and Ministerstwo Lacznosci (Ministry of Communications), utilizing their facilities and equipment. The quality of their observations has won foreign recognition, the Polskie Centrum Obliczeniowe (Polish Computing Center) processes and analyzes data observed in many European stations, and work is now in progress on devising a way to convert sound into visual signals in meteorological observations. The author notes the resultant benefits to the Polish economy by way of contribution to eventual improved television reception and improved meteorological forecasts.

ASSOCIATION: None

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